

SEQUENCE LISTING



(1) GENERAL INFORMATION:

(i) APPLICANT: DE LEON, F. Abel Ponce
CIUFO, Stacy
ROBL, James M.
AMBADY, Sakthikumar
SMYTH, JR., J. Robert

(ii) TITLE OF INVENTION: Z-CHROMOSOMAL MARKERS DERIVED FROM
CHICKEN (GALLUS DOMESTICUS) AND USE THEREOF IN CHROMOSOMAL
MAPPING

(iii) NUMBER OF SEQUENCES: 19

(iv) CORRESPONDENCE ADDRESS:

(A) ADDRESSEE: BURNS, DOANE, SWECKER & MATHIS, L.L.P.
(B) STREET: P.O. Box 1404
(C) CITY: Alexandria
(D) STATE: Virginia
(E) COUNTRY: United States
(F) ZIP: 22313-1404

(v) COMPUTER READABLE FORM:

(A) MEDIUM TYPE: Floppy disk
(B) COMPUTER: IBM PC compatible
(C) OPERATING SYSTEM: PC-DOS/MS-DOS
(D) SOFTWARE: PatentIn Release #1.0, Version #1.30

(vi) CURRENT APPLICATION DATA:

(A) APPLICATION NUMBER: US 60/034,410
(B) FILING DATE: 02-JAN-1997
(C) CLASSIFICATION:

(viii) ATTORNEY/AGENT INFORMATION:

(A) NAME: Teskin, Robin L.
(B) REGISTRATION NUMBER: 35,030
(C) REFERENCE/DOCKET NUMBER: 002076-001

(ix) TELECOMMUNICATION INFORMATION:

(A) TELEPHONE: (703) 836-6620
(B) TELEFAX: (703) 836-2021

(2) INFORMATION FOR SEQ ID NO:1:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 215 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

GATCACTTTC CCTAATATTC TTGTGTTTCT TGTTTGTTGA CCTGTAATGC AGTTCTGAGT 60
TTTGAAAGG AACTAATTAA GACCAGAGGA GAGATAATTT TCTTTTATCA AAAAACAAAC 120
AAACAAACAA AAAACGAAT TCTTACCACT TTACAAAAAT TTTCCATTTT GAAGGCCAGT 180
ACAGCCATAG CATTATCTA CTTTTTGCTT TGGAT 215

(2) INFORMATION FOR SEQ ID NO:2:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 482 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:

GATCAGGTGG CCTGTAGTAG ACAACAACAA CAATGGGGTG CCCTTTGTTG CTTAGTCTC 60
TAACTCGCAC CCACACACAC TTTCAAGTTG CTTGTGGCCA TTCTTCAGGG ACAGTTCTTC 120
ACAATCTATT CCTTTCCTGA TGTAGAAGGC GTCACCTCCT CCCCTCCTGC CTCGTTTGTC 180
CCTTCTAAAC TGCAGGTATT AGTATTGATA GCTAAGGTCA AGTCATGGGA ACCATCTCAC 240
CAGGTTTCAG TGTTGGCAAC TATGTTATGC TTTCTTAGGA GCATGGTGGT TCCAACCTTT 300
CCCTGCTTAT TTCCCAAGCT GTGTGTGATG GTAGGATAGC ATTCAAGTGG GAGGAGCCTA 360
TCGGCTTTTT GGAGGTACTC CTAAATCCCT GATATTCCCC TGATTCCCGT ACTTCTTCCT 420
TGCCAAGGGC CCGCCAATGC ATAGTTCAAT TTCTCATGCA GACGCTAAGG AAAGGTGGAC 480
CC 482

(2) INFORMATION FOR SEQ ID NO:3:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 285 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:

GATCGTATGT ATTTTTTTTAC ATAGGATAGA AAATGGCCAA TAGGAAATAA GACAGTACAG 60
CTACTAAGAA AGAAACACAA TTACACACAC ACACACACAC ACACACACAC ACACATTTGA 120
AAAACGCGCT GCACAGCAGT GTGGGTATTT TTTCACAAGA GAGACACACT CTACAGTACA 180
CAGCCAGCTC TACTTTGTCTG CACAGTCTCA GTGTGTGTTT GCCAACAGGA CGCGGTTTAC 240
AGGGAGATAT TGTCCTCTTG TGTGTGTGGA GACACAGAGA CAGAG 285

(2) INFORMATION FOR SEQ ID NO:4:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 355 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:

GATCCCCTGG AGGAAGGGCA ATGGCAACCC ACTCCAGTAT TCTTGCCTGA AGAATACCAT 60
GGTCAGTTTT GCCTCCTGGG CTATAGTCCA TGGGGTTGCA AAGAGTCAGG CATGACTGAG 120
CGACTCTCTC TCTCTCTCTC TCTCTCTCTC ACACACACAC ACACACACAC ACACACGGCG 180
TCTCTCTCTC TCTCTATACA TATAGGCTGT GTGTCTCGCT ATTCTCACAT GAGGGAAACT 240
CATATCTAGC ACGTGGCACA AATATTGTTT GTGGCTCTCA CAAAAGACAT GTGGGCGCAC 300
AAAGGTCCCC CCCCGGTGGA TACANCGCCT TGGTTTTTTTA TAACCCAAGC CTGTG 355

(2) INFORMATION FOR SEQ ID NO:5:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 196 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:

GATCACATAT GTAAACTAGG GAATTGCATA ATAAGATTAA ATGTAGGTGT AGAACGTGGC 60
ATGAAGGAAG GTAGAATTAG GTGGTACCTA TCTCTTCTGA AACAACTGA GAATCCTACT 120
ACCAATCAAC ATATTCTACA TACCACACAC ACATTTTTTC TCGAGTAAAA TATAAACTAA 180
TGAGAAACTT CCCTAG 196

(2) INFORMATION FOR SEQ ID NO:6:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 474 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:6:

GATCCCAAGC AACACATAGN CAGACAATCA CACACACACA CACACACACA CACACACACA 60
CACACACACA CACATCCTCT CCCCACAATA CATCCCGAGA GGGGGGAGAG ACACTCTCTC 120
TCCCTCTCTA TAGGGGAGAC CCGGAGAGCT GGCTCTGTTG TCTCTCTACA CCGGACATAC 180
AGTGGAGCAC ATCTCACACT TGTGTCTTTG TCTCTCTACA CCGGACATAC AGTGGAGCAC 240
ATCTCACACT TGTGTCTCTA TCTCTCCCTG TCCCTGTTGA TCCATCTCTC TTCACACATC 300
TCTCCAGATC TTAGCGCTAG AGTCTCCTGT CTTCTCTCTG CGCAATTTGT GTGATAGAGA 360
CACCTGATAT GTTGTGTGGG GGAGACATCT GTGTGTCTCT GTGTCATCCC AGAGGATTTT 420
TCTCTCCAC ACTTAGAGGC CTTCTCAAGA GATGGGAGGT TTTAATGGGG TGTG 474

(2) INFORMATION FOR SEQ ID NO:7:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 146 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:7:

GATCATTCTT CTGTTTCCCA TTCTAATGGG AATTCTCCAC ACACACACAC ACACACACAC 60
 ACACACACAT CTTCTTCCCC TTACATGGAA AAAAATCCTC CACACCCCTG GACTGTGATT 120
 ACTCTCCCTC TTCCCAGAGA GAGATC 146

(2) INFORMATION FOR SEQ ID NO:8:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 422 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:8:

GATCCCCTAG AGAAGGGAAT GGCTACTCAC TCCAGTATTC TTGCCTGGAG AATTCCTGG 60
 TCAGAGGAGC CTGGAAGGCT ATAATCCATA GAGTCGCAAG AGTCAGACAG GACTGAGTGA 120
 CTAACACACA CATGCACACA CACACACACA CACACACACA CTTGCTCTAG GGAGAGGCAT 180
 AGAGATGTAA TCTCTCTTAA AATGGGGGTG GCGATGGCCC CTGCGGCCAA GTAATCGCCA 240
 CACATGCGTA TTCCCCTTAA GATTGGGTTA GGCCTCCCTT ATGAGGAGAG ACCAGGGAGA 300
 GAATGGGCTC TCTCTCTCTC TCACTCCCCA ACCGAGTAAG TGGTAAAAAA GTTTTCTCTG 360
 GATTACAATT TTGGTGTTAC AGAATTGGAA AAAAATATTT TTGGGGCTCC CCCCTCAGTT 420
 TA 422

(2) INFORMATION FOR SEQ ID NO:9:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 280 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:9:

CTAGCAAAAA CACCCCCACA AGTTATGAAA ACAACGGCTT AATATAGTAA TGTGTGTGTG 60
 TGTGTGTGTG TGTGTCACAC CACAGTTTTT TCTGATACTC AAACCTCTCT CTTTCTCTAC 120

AGGGGCCCCC CATAACACAG CGGCTGAGAT GTGTGACGGG AAGGCGTGGC CTTTTACACA 180
 TTTGTGGTAT GGTCTGCCAA GGCCCCCTAT TGCCCCCAC AACTACGGAG ATACACTAGG 240
 GGCGACCCGC AGGCGCGCGA CCCCCAGGTG GGGCCCCGAG 280

(2) INFORMATION FOR SEQ ID NO:10:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 478 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:10:

CTTTAGGAGG TTCTCTCGAG TAAGCTTTTT GGATTCTTT GTTCCCAAG CATCACATGG 60
 TACAGGCAGT CACACACACA CACATACACA CACACACACA CACACACACA CACTCCTCTC 120
 CCCACAATAC ATACCGAGAG GGGGGAGAGA CACTCTCTCT CCCTCTCTAT AGGGGGAGCC 180
 CCACAGAGCT GGCTCTGTTG TCTCTCTCCA CCGGACATAC AGTGGAGCAC ATCTCACACT 240
 TCTGTCTCTA TCTCTCCCTG CCCCTGTGAC ATCCATCTCT CTTACACAA TCTCACCAG 300
 GATCTTAGCG CTAGAGACCC CCTGTCCTTC TTCTCCTGGG GAAATTTTTT GTGGATAAGA 360
 GACACCCGAT ATATTGGTGT GGGGGAGAAC ATCTTGTGAG GTCTCTGTTG TGCCATCCCA 420
 ACAGGAATTT TTATCTCCCC CACAATTAGA GGCCCCTCCT CAAGAGTGTG TGAGGGTT 478

(2) INFORMATION FOR SEQ ID NO:11:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 198 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:11:

GATCAGAGAT GTATGTATTT TTTTACATAG GATAGAAAAT GGACAATAGG AAATAAGACA 60
 GTACAGCTAC TAAGAAAGAA CCCACATTTA CACACACACA CACACACACA CACACACACA 120

AGTGTTTAAAT CCGCTGCACA GCATTGTGGA CATTTTTTACA CAAGAGAGAC AACTCTACA 180

GTTTGCGCCC AGCTCTAG 198

(2) INFORMATION FOR SEQ ID NO:12:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 194 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:12:

GATCATTCTT CTGTTTCCCA TTCTAATGGA ATTCTCCACA CACACACACA CACACACACA 60

CACACACTCT TCTTTCTCCT GACATGGAAA AATCTCCCCC ACACCCCGGG AACTGATTT 120

CTCTCCCTCT CCCCAACACT GTGAGCAAGA GGAGTTTATT TTGTGTGTGT CACTCTTCCA 180

GGGAGAGAGA GATC 194

(2) INFORMATION FOR SEQ ID NO:13:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 200 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:13:

CTAGGCATCG GTTGGGAGGT GGTGAGTAAT TACTTGTCTG ACATTAGTCC TGTAACATTG 60

GGTGTGTGTG TGTGTGTGTG TGTGTATTCC CCTTGGAAT TGGTTTTCTC AACCACAAGT 120

TCTTCTTTTT TTTTTTCTC CCCCTTTTC TTCTGAAAAT AAGTACTTGG GGGGTTTCCG 180

CCCCCCCCCGG TAAATAAAAT 200

(2) INFORMATION FOR SEQ ID NO:14:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 395 base pairs
- (B) TYPE: nucleic acid

(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:14:

CTAGTGGCTC CCAAGCAACA CATAGCCAGA CAACACACAC ACACACACAC ACACACACAC 60
ACACACACAC ACACACACTC CTCTCCCCAC AATACATCCC GAGAGGGGGG AGAGACACTC 120
TCTCTCCCTC TCTATAGCGG GAGCCCCACA GAGCTGGCTC TGCTGTCTCT CTACACCGGA 180
CATACAGTGG AGCACATCTC ACATTCGTGT CTCTATCTCT CCCTGCCCCT GGTGACATAC 240
ATCTCTCTTC ACACATCTCA CCAGGTCTGA GCGCTAGAGT CTCCTGTCTT CTCTCTGCGC 300
AATATTTGTG ATAGAGACAT CTGATATATT GTGTGTGGGA GACATCTTGT GAGTCTCTGT 360
GTGCATCCCA GAGGATTTTT ATCTCCCCAC ACTAG 395

(2) INFORMATION FOR SEQ ID NO:15:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 447 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:15:

GATCCATGAA AACTTTCCGA GTTGTATTGT CTAGGTGAAA ACACACACAA ACACACACAC 60
ACACACACAC ACACAACAGG GAGATGAGTC TTGCAAGAGA ATAGGGGAGA GTTATGTCAC 120
CAAGTCTGGT GAGGTATATA GCGTATAGGG AGCCAACATG TCAGACATCT GATGTGCTAA 180
GATTAACATT TTATTTTATT TAATGTGTGA GATCTCATAT AGCGGCTCTT CTTATATATG 240
ACGTCTCGCA ATGTCTCTTT ATGTGTGTTA TTCTCTGAGC CCCTGGGAGA TATCTGTCAT 300
CAGAGAGAAG AGACATACAC ATACAGGGGT TATATATTTT CTCCCTGTGT GTGGAGATGG 360
AGGGTATTTT GGACAAGCTC AACACTCATT GGCTCCCAGA GAGAGAAAAG GAGCAACTGT 420
TGCACCCGGG GCTCTGTAGC TGGGATC 447

(2) INFORMATION FOR SEQ ID NO:16:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 300 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:16:

CAATTGGGTA CATCTACCTG GTACCCACC CGGGTGGAAA ATCGCATGGG CCCGCGGCGG 60
TTCTAGGAAG TACTCTCGAG AAGCTTTTGG GTTCTTTGGG TCCCAAGCAG CACATGGACA 120
GGCAATCACA CACACACACA CACACACACA CACACACACA CACACACACA CTCCTCTCCC 180
CACAATACAT CCCGAGAGGG GGGAGAGTCA CTCTCTCTCC CTCTCTATAG GGGGCGCCCC 240
TAAGAGCTGG CTCTGTTGTC TATCTACACC GCACATACAA TGGAGCACAA CTCACACTAG 300

(2) INFORMATION FOR SEQ ID NO:17:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 358 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:17:

GATCAAAGCA TGGAGGTCAT GCCAGGCACT GAACAAAATG GTAGAGAGTG ATTCTATGAC 60
TGACTAAGAC CTCATGCAAC AACAAGTGAA GAGTCACAAC TGCAAACAGA AGTACAACCT 120
AGCAAATCCT ATTTTCAGGA AACACTAAAC CGTAATACTT GCACGATTTT TTCTTTAATA 180
CAGTAATAAT TCTTTTAGAA TTTGGATATA TCTTTTAAGA TACATATTTG TCTAAATACC 240
AAGGCAGGAT ATGAGCATAA AATAGCTAAG GTTAGCTATG GTGTTATATT TAAGAAGACC 300
ACAGAGCAAT AGGAGCATAC TTTTCTTGGG GTAGAAGGGG CCCTTAAAGG TCACCTAG 358

(2) INFORMATION FOR SEQ ID NO:18:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 289 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:18:

Al conf

CTAGCCACAT CCTATAACTC CACTCCACCT TTAATCCTGA TTTCTGTGTC TCTTCTCTAA	60
CCTCTATGGC CTTTCTCTAA AGTTCCCCAA TATCAACAAT CCTTTTCCCC ACTGGGACCT	120
CCAGTTTATT GATTCTACCA TGTCACATC CATGGTCAAC CACTTGTGGT ATTATAGGAT	180
GTCGCGTGTG TGTGTGTGTG TGTGTGCATG TGTGTGTGCT TGGGTGTCAG AGAGTTCCAA	240
TCTGGGGGAC CTATGGTTTG TAAACAACAG GTCTCTTGCC AAGGAAGAT	289

(2) INFORMATION FOR SEQ ID NO:19:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 216 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:19:

CTAGCGCTCG TGCCCCTGCA GTTCGACACT CAGTGGCTCC TCCACACACA CACACACACA	60
CACATCAATA TATATATAGA TAGATAGATA GATAGAGGAG CAATATAAGT GGCTTCTCTA	120
TTTCCAGCAT GTTTTGAAGA GCATAAACTC AACAGAGTAT ATATAAATCT GATGTGACCC	180
ATGTCATCTG CTACAGCATG AGAGGGGGTA GTGATC	216